

Ontario  
fish and wildlife

Review Vol. 18, No. 2, 1979





Kerry Coleman reports from the conservation front. The people at Nonquon are fighting the good fight . . . History in the making.



History was made at Larose Forest last November and Bert Van Wout is our blow-by-blow historian . . . Something new in moose hunts.

Stas Status tells how Indians are keeping up old traditions and mechanizing the wild rice harvest . . . Living history.

Bob Alison sets down the verbal splendors of hunters long ago . . . It's enough to make you yearn.

Fishermen . . . Lock up your alewives. Here comes Allan Wainio.

# Ontario fish and wildlife Review

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*The goal of the Ministry of Natural Resources is to provide opportunities for outdoor recreation and resource development for the continuous social and economic benefit of the people of Ontario, and to administer, protect and conserve public lands and waters.*



Ontario

Ministry of  
Natural  
Resources

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## Hands Off

There are ominous signs that lake trout are in jeopardy. Already they have become extinct in 74 lakes in Ontario.

In 1972 fishery research scientists R. A. Ryder and L. Johnson stated that, at the present rate of interference by man, lake trout communities will be reduced to insignificant levels within the next 30 years.

Although Ontario has approximately 250,000 lakes, only about 2,000 have lake trout—less than one per cent—yet this small percentage is one-quarter of the world's supply. These large trout occur naturally only in northern North America.

The lake trout is the only major sport fish adapted to living in the deep cold basins of our northern lakes. Its need for cold water during the summer effectively eliminates it from the countless shallow saucer-shaped lakes of the province.

The coldwater lakes have a limited number of fish species such as lake trout, whitefish, herring and ling. When these species are gone there is nothing much left to fish for; the lake fishery has collapsed. Furthermore, these lakes can support only a limited biomass of lake trout, and natural reproduction in most cases can maintain it. Because of this, artificial stocking is valueless.

The lake trout is a fragile species, living in an inhospitable environment low in nutrients. It grows slowly, matures late and possesses a low reproductive potential. Genetically it is ill-equipped to withstand the stresses imposed by modern man.

A major stress is fishing pressure. The northern lakes are more easily accessible than before. The spreading network of logging roads is opening more lakes to vehicles; snowmobiles carry in more and more anglers; and the now ubiquitous airplane flies to all remote trout lakes. The onslaught is made even more efficient by new fishing technology such as temperature and oxygen probes and downrigging equipment which effectively invade the trout's deep summer refuges.

The result is overfishing. R. A. Ryder has reported that an entire year's production can be taken in a few days of winter angling in a northern lake. The problem is province-wide.

But anglers are not alone to blame. Cottagers and developers do irreversible harm.

Cottages spring up and quickly spread around a lake's edge, causing pollution and shoreline damage. Developers of subdivisions, resorts and marinas accelerate the degradation of the lakes. Dams which cause fluctuating water levels do untold harm to spawning beds. Mines, mills and factories continue to pollute our lakes. And even more insidious, the acid rain is quietly falling.

The lake trout faces a bleak future. Is there any hope?

This aristocratic fish has given us an early warning of what is happening both to it and its lake environment. We should heed this warning.

Its demise can be averted. If people consider the lake trout worth saving, they will have to be less greedy and back off to give it room to recover and prosper.

Hands off before it's too late.

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## INTROSPECT

*A personal opinion  
not necessarily endorsed by  
the Ministry of Natural Resources*

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### Of hunters and berry pickers

by H. D. Jenkins

*Wildlife Information, Wildlife Branch*

In the mind of the anti-hunter, the average hunter is an ignorant, crude, ill-mannered, beer-guzzling barbarian who gets a kick out of tromping through the woods disturbing and frightening wild animals in the hope of catching one unawares so he can cruelly and mercilessly kill it with his gun and watch in degenerate ecstasy while the hapless creature writhes in its death throes.

Groups of anti-hunters often discuss such loathsome behavior with disgust and indignation as they enjoy a quiet dinner of veal cutlets, roast turkey, lamb chops, or what have you. Calves, turkeys and lambs do not appear to be a cause of concern though their chances of survival are considerably lower (namely, none at all) than any animal being pursued by a hunter.

The anti-hunter's view of hunters is well-publicized, emotionally appealing, and extremely difficult to dislodge.

Anti-hunters are largely insulated from the realities of the natural environment. Nature to them is an idyllic world where the creatures of forest and glen live in peace and harmony, only asking they be shielded from the destructive intrusions of mankind. Like Pogo Possum and his friends in the swamp, all will be well if they are just left alone.

A good example of this is the much publicized opposition to the annual seal hunt. "If those rotten seal clubbers would just leave those cute little things alone, they could live out their days basking in the sunshine on the ice in peace!"

The truth, however, is quite different. Even if a baby seal is not threatened by human hunters, there is no guarantee that it will not be eaten by a polar bear. If it reaches

maturity, it will have to face sharks, killer whales and other dangers of the sea. Further, it will spend most of its adult life terrorizing codfish and other smaller sea creatures, killing and eating them. Can it possibly be imagined that the seal cares whether it is killed by a man or a bear or a shark? Also, who or whatever kills a seal is doing the codfish a definite favor.

A few years ago, I read a popular book which described how to go out into the woods and gather all sorts of food—berries, nuts, cattail roots and so on. All these things could be prepared as tasty and nutritious dishes. Among the people who contributed to the book's success were a number of "nature lovers," many of whom were also anti-hunters.

The irony is that these are the very people who should be most able to understand the appeal of sport hunting. Just as there are people who prefer to gather their own fruits and vegetables at times, instead of buying them at a store, so there are those who prefer to obtain their own meat from the wild at times, instead of buying it at a store.

The average hunter is simply a person who wishes to return to nature for a while, and his hunting is no more a violation of nature than is the hunting of wolves for deer, or the hunting of hawks for rabbits, or the berry picking of other humans. Man is every bit as much a part of the natural order of things as any other living creature on the face of the earth. Our urbanized civilization may sometimes hide this fact from us, but it remains a fact all the same.

It is true that some hunters are careless and wasteful, and there is no doubt that this merits attention and whatever correction may be possible. At the same time, the existence of poor hunters does not mean that all hunting should be eliminated. Bad drivers do not lead to the banning of automobiles. Battered children do not lead to the banning of babies.

Personally, I have never participated in either hunting or fishing (although I have done a little berry picking). These activities hold no attraction for me, but I think it is unfair that ill-informed and emotional diatribes should threaten activities which offer other people satisfaction and fulfillment in Ontario's outdoors.





*John Bols, biology student, examines jaw of a Larose moose. —Photos by John Carrington*

## Ontario's first controlled moose hunt

by Bert Van Wout

*Conservation Officer, Cornwall District*

**I**T was 4:00 a.m. on a chilly Monday, November 13, 1978, when the first shift of conservation officers came on duty. In a briefing session held the previous evening they had been handed their instructions for the first controlled moose hunt in Ontario. But no one could predict what would happen on the first day.

For the many moose hunters residing in eastern Ontario it was the first time ever to hunt the "Monarch of the North" at Larose Forest only 70 km (43 miles) east of Ottawa. For those unable to make the long trek to northern Ontario, here was a golden opportunity to bag a highly-prized big game trophy close to home. But how would they accept the selection of a small number of hunters by lottery?

The probability of bagging a moose anywhere is slim. It takes hard work, patience, know-how and luck. There would be a double game of chance in this hunt. First, the hunter must try his luck in a lottery and, if successful, then he would have a chance at one of only 20 moose to be harvested from Larose Forest.

With flashlights in hand, Ministry of Na-

tural Resources officers took their designated positions to control traffic on roads leading into Larose headquarters. About 30 vehicles were parked in the large lots and many of them had been there since 2:00 a.m. By 5:00 a.m. traffic had increased so much that the north-south road from Bourget was backed up about 1 km, and the east-west road for nearly the same distance. Fortunately, no major snarls developed.

The deadline of 6:00 a.m. was fast approaching as the last red-coated hunters scurried from their cars and headed for the large equipment shed. They stood huddled in line waiting anxiously to receive their free numbered tickets. As they filed through the doors, they quickly scribbled their names and addresses on one-half of the ticket and promptly handed it to the uniformed officer who shoved it into a clear, plexiglass box.

Excitement filled the building as a sea of red and orange hats waited impatiently. They talked about hunting, the weather, the layout of the forest, and all the tracks and signs of moose they'd seen in the past when they had hunted Larose for small game.

The large steel sliding doors soon had to



*At 6:00 a.m. more than 1,000 hunters await their luck in the moose lottery.*

be opened because the shed could not accommodate the thousand-plus moose hunters who had come to try their luck in the first draw. Most of them had read the Ministry's news release of two weeks previous and knew that only 60 permits would be issued each morning and would be good for that day only. Still they were willing to take a chance. Besides, the odds of winning would be better than in most lotteries.

At 6:00 a.m. Ronald Belanger, regional enforcement co-ordinator, walked onto the platform to announce the start of the draw. A hush fell over the crowd as Belanger picked up his megaphone to explain the rules and procedures of the hunt. Newspaper reporters and cameramen were on hand to record the event.

The rules were simple. The hunt would last until November 19, or until the quota of 20 moose had been taken. Thirty names would be picked each morning during the daily draw. Each successful applicant could declare a hunting partner from those in attendance. All 60 hunters must report back to the headquarters by 6:00 p.m. and bring in all moose kills for examination by Ministry biologists.

Provincial moose licences would not be required for the daily draw but were necessary for selected hunters and on sale at the site. The licence would be exchanged for a daily permit and returned to the hunter at the end of the day's hunt. Only Ontario residents

were allowed in the draw. All small game hunting was banned in the moose hunt zone.

If a hunter was unsuccessful in the draw or the hunt, he could try again every morning. Hunters would be allowed to use high powered rifles in an area where such weapons had been usually prohibited. Moose hunting was to take place only inside the designated boundaries which had been well marked the day before the opening with hundreds of signs.

Safety was emphasized. All regulations would be strictly enforced by 14 conservation officers working shifts around the clock.

After the rules had been declared, the ticket box was vigorously shaken in plain view of the assembled hunters. All ears strained to hear the first name read out. As it was announced a joyful cry went up from somewhere in the huge crowd. The lucky hunter and his partner made their way to the front and were directed to another smaller building across the lot.

Here they received their daily permits and a detailed map of the hunt area. Each hunter received a red safety vest specially marked to make him easily recognized in the forest by conservation officers. Finally, the licence number, color and make of vehicle were recorded. Everything was in order, and off they went with high anticipation.

They had been lucky once, would they be





*Lucky moose hunters pick up their one-day permit.*

lucky again and come up with a prize moose before the 6:00 p.m. deadline?

Back inside the equipment shed, a loud cheer erupted as the name of the first of two women was drawn. Soon all 60 winners had received their permits.

After the last name had been called, murmurs of disappointment were heard as the unfortunates trudged off to their vehicles. For many hopefuls tomorrow would be another day, another draw. Most of the hunters had enjoyed the excitement of the lottery, and for those who lived in and around Ottawa, little time had been lost travelling and waiting.

The first report of a downed moose came in at 9:00 a.m. A big old bull had been taken by a local veteran hunter; it weighed close to 450 kg (990 pounds) and sported an antler spread of 109 cm (43 inches). Four more moose were bagged that day in the 70 km<sup>2</sup> (27 square-mile) main block of Larose Forest. The action would begin again the next day.

Larose appears to have all the elements of good winter and summer moose range. The mixed hardwoods and conifer plantations provide protection from the cold winter wind. Open fields adjacent to this cover provide sunlight. Favorite foods, such as willow, birch and aspen, are within short reach, as are the many small beaver ponds and creeks.

Moose were a common sight in Prescott

and Russell Counties in the early 1900s. Then, for unknown reasons, they disappeared, the last apparently having been sighted by a local farmer in the Alfred Bog, 24 km (15 miles) east of Larose. It was 1952 when the moose returned to the bog. From reports of sightings on the Ottawa River near L'Original, the animals appeared to be crossing into Ontario from Quebec. This movement is still continuing.

The Alfred Bog moose population increased to more than 29 animals by 1970. Only 3,200 ha (8,000 acres) in size, the bog supports a spruce forest surrounded by subclimax stages of shrubby growth, young poplar, bush lots and willow-alder swamps. The mineral springs of the bog seem to attract moose the way honey attracts bears.

By 1976, moose numbers in the area had increased to such an extent that both the Ministry and the public became concerned. Movements of the huge animals into the surrounding countryside and into Larose during the summers and autumns created many problems. Moose-car collisions were becoming a frequent occurrence, as was extensive damage to farm crops and fences, with farmers claiming up to \$1,000 in damage.

In the fall of 1977, four moose wandered into Ottawa and three had to be dispatched by city police and Ministry staff.

Aerial and ground surveys conducted during the 1976-7 winter found that more than 100 moose in Alfred Bog were showing



signs of stress and starvation. In places young poplar trees up to 7 cm (three inches) in diameter had been snapped in two by moose trying to reach the tender branches. There was also an increase in tick infestation among moose found trapped in steep-sided drainage ditches and fences and killed on the roads throughout the winter and spring of 1977. Biopsies conducted on these animals by the Kemptville Veterinary Services Laboratory showed that some had suffered from malnutrition.

In Larose conditions were not as severe. A winter survey in early 1977 revealed only ten moose but the next year the number shot up to about 30 animals. There appeared to be a steady emigration from Alfred Bog throughout 1978. Moose sightings became common between the Alfred Bog and Larose Forest.

A Ministry planning committee, made up of district staff from Cornwall and Ottawa districts and regional personnel from Kemptville, was formed early in 1978 to design a management plan for the Larose-Alfred herd. The first priority would be to control the moose population.

The only feasible solution was a con-

trolled harvest. It was evident that this moose herd, one of few in southern Ontario, had become too large to remain healthy in the limited habitat.

A controlled hunt in the Alfred Bog would not be possible in 1978 because of the legal complexities involved in setting up a hunt in an area belonging to more than 100 landowners. Therefore, the hunt would be conducted in Larose Forest which is managed by the Ministry of Natural Resources under a lease agreement with the United Counties of Prescott and Russell.

It would be the responsibility of the planning committee to design a hunt format, contact local interest groups, recommend appropriate legislation, operate the hunt, and devise a fair system to control hunter numbers and the harvest. And how did it work out?

At the second draw, Tuesday morning, 580 hunters were on hand for a crack at the remaining 15 moose; twelve hunters who arrived late had to be turned away.

The hunters' luck went down that day. By evening their efforts had produced only two moose.

On Wednesday when the last hunter had



checked in, only one young bull could be seen hanging from the rafters in the weigh-in shed.

Fresh moose tracks were not as plentiful along the many dirt roads, and lack of snow and thick bush made both tracking and seeing difficult. Many hunters claimed the moose had left the legal hunt area.

Thursday, much to everyone's surprise, turned out to be a busy day for both hunters and Ministry biologists. From 8:00 a.m. until dark, officers raced from one kill to another. Nine moose were brought in and weighed.

This left only three moose to be cropped. If another hunt were to take place Friday, its results might surpass the quota of 20. However, it was decided to go ahead.

Rain began to pour down late Friday afternoon, and still no reports of any downed moose. Approaching 6:00 p.m. a call came over the radio claiming that a bull and a cow had been taken near a beaver pond, and that the two hunters were having problems getting their kills out of the swamp. Soon afterwards, a third moose was reported to have been taken in the vicinity of the other two. Two accountants from Ottawa, whose names had been picked that morning, claimed moose numbers 19 and 20.

The hunt had ended.

During the five-day hunt, 12 bulls, five cows and three calves were harvested. Average dressed weights of bulls and cows were found to be 279 kg (614 pounds) and 230 kg (507 pounds) respectively. The oldest moose taken was a female aged 15½ years while 16 of the 20 harvested were under four years. Other biological data and samples taken from the moose (such as antler measurements, heart girth and reproductive organs) will aid biologists in understanding the biology of the Larose-Alfred herd.

The hunt attracted 3,271 moose hunters and 300 actually took part. Most of them were nearby residents from Prescott and Russell Counties, Ottawa, and surrounding areas. Some, however, had travelled from as far away as Toronto, Hamilton and Sault Ste. Marie.

The hunt turned out to be popular with the moose hunting fraternity. Many enjoyed the excitement of the early morning draw, and those lucky enough to take part in the hunt, and even to bag a moose, found the event well planned and safe.

A post-hunt aerial census, conducted a week after the hunt when the first snow fell, indicated at least 15 moose still remained in Larose Forest.



*Four of 15 moose seen in Larose a week after the hunt.—Photo by Bert Van Wout*

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## LETTERS IN REVIEW

*Readers of 'Review'  
are invited to set forth  
their views in these columns*

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### Fishing derbies

Here's support for your thoughts in "Fishing Derbies—Commercial Angling" in the 'Review' for Winter, 1978.

I recall being a little taken back when I first learned there are "professional" fishermen who are able to sustain themselves on a North American fishing derby circuit. They often have little vested interest in the fish resources of an area other than for the duration of each contest.

A contest can actually be successful in an area which is poorly endowed with fish as long as enough are caught to declare a full slate of winners. A few large fish make good publicity.

Ontario fishing is regulated mainly through vested interests and internal feedback. In a province with some 250,000 lakes we must rely heavily on these social forces in the management of our fisheries because any one with a minimum of experience who wants to abuse the fishery can do so in most of these lakes. We do not have the manpower for enforcement to be much more than symbolic. In fact, COs probably function better in educational roles which reinforce vested, respectful interests.

Fishing derbies clearly draw heavily on external forces, thereby weakening internal ones. Rules govern in lieu of common sense.

We have, in Ontario, lost innumerable stocks of fish, many populations and some species. We have not lost more because, aside from the above influences, the resource is vast and the fishery relatively diffuse. Fishing derbies unfortunately negate these advantages because they are spatially and temporally restricted, yet often do not limit the number of participants.

Though on most of this you and I seem to agree, I do not think that derbies give fishing the publicity it deserves. If cash per unit effort, maximum sustained brood, and exotic species succession are incorporated much more deeply into the sentiment of Ontario

fish management, then we will have ceased to manage fisheries but could do well as amusement park operators.

The economic assets to which you refer owe nothing to fishing derbies. If internal management is to be improved, the publicity that fishing needs is that of restrained use of a valuable, vulnerable common-property resource—focus on quality rather than quantity, understanding instead of compliance.

As Jack Vallentyne says, we are part of the ecosystem, not outside looking down on it.

All of which is not to assert that fishing derbies are necessarily bad—only that they are in their current form. Thanks for printing the article.

*Tom Whillans*

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### Lake Ontario

The Lake Ontario Status Report that appeared in the Spring edition of 'Review' will not be looked on favorably by this province's anglers.

Resentment over this province's splake program is building noticeably. As recently as September 6 in Sarnia and September 18 in Owen Sound, hundreds of taxpaying anglers rejected the splake vociferously after hearing MNR's future plans for the hybrid fish. They insisted that our fishery staff get off this sick "mule" and work with Mother Nature's own invention—the lake trout.

To say that closure of commercial whitefish netting "was finally effected by 1980" on the eastern basin of Lake Ontario seems to indicate the ineffectiveness of MNR in controlling the province's gill netters. According to the Great Lakes Fishery Commission Technical Report No. 23, W. J. Christie and H. Regier were saying as far back as 1968 and 1973, respectively, that the "stress induced by the fishery alone was sufficient to account for the decline of the whitefish." Why should it take 10 more years to put a stop to this carnage?

*Peter E. Sticklee*

*Box 167*

*Weston, Ontario M9N 1X4*





*Wild rice is a lake crop.*

## Wild rice—more than a cash crop

Report and photos by A. R. Stasus  
*Biologist, Sioux Lookout District*

**F**ROM the earliest times wild rice has had a significant impact on the lives of Indians in the north. Some Indian groups settled close to wild rice stands and still live close to wild rice today. One such settlement is the New Osnaburgh Reserve, located 120 km (75 miles) northeast of Sioux Lookout on Lake St. Joseph. More than 9,000 ha (22,000 acres) of wild rice stands are within two days of travel by canoe.

The 800 residents of New Osnaburgh are generally disposed to spend their time within the confines of the community. With the coming of August, however, an increased tempo is evident as families begin to prepare for the annual rice harvest. Every one from the elderly to children participate in the preparations.

Canoes are retouched with fibreglass and given a new coat of paint. Outboard motors are checked and camping gear is made

ready. One feels that the primary inner drive of the busy people is not the prospect of monetary gain but the opportunity to leave the settlement and embrace a long tradition of outdoor life.

Travelling the waterways at this time of year, one meets many groups going to their traditional rice picking areas. The passing canoes are a series of low silhouettes on the water, indicating the weight of the supplies being carried. The supplies are needed to live in the wilderness during the rice harvest which may last up to five weeks. Large canvas tents, air-tight stoves, 10-gallon drums of gasoline, personal effects and food make up the cargo.

Rice pickers supplement their food supply with fish and wild rice once they reach the harvesting area. Yellow pickerel (walleye), pike and suckers, either cooked or smoked, form the main food staple. Any surplus



WILD RICE . . . IN FLOWER . . . FROM THE AIR . . . AT HARVEST TIME.







BELOW . . . RICING THE OSNABURGH WAY.



smoked fish are taken back to the village and consumed during the winter. The picked rice is dried over open fires, cleaned and used in daily meals.

The waterways are shallow and have many falls and rapids. These are scenic attractions but put the travellers to a great deal of physical effort. The heavy canoes can be lined through some of the rapids but at waterfalls and difficult rapids a different approach must be taken. The pickers cut poles and place them on the ground to form skidways. Sliding the loaded canoes across the skids is easier than the usual 'carry' at a portage.

In the Indian community, the wild rice harvest is a family affair with all the members contributing. The adult males harvest the rice. The mothers and grandmothers look after the meals and campsite order. The children, as their capability permits, enthusiastically help to bag the wild rice brought in by the harvesters.

Undoubtedly the family effort makes the rice harvest a pleasurable event, rather than a burdensome undertaking. Perhaps this type of activity is the thread that has helped to bind the family together.

The harvesting of wild rice generally begins in the second week of August and continues into the early part of September.

For the Osnaburgh people, the traditional harvesting by hand has given way to a more mechanized method. Gone is the tedious task of paddling a canoe and flailing the rice by hand.

The Osnaburgh type of harvester is a wooden A-frame form mounted on the front of an 18-foot square-stern canoe. The leading part of the harvester is about 3 m (10 feet) wide. It is built of wood and screening to form a backdrop and trough to catch the rice. The leading edge is a round pole several centimetres in diameter. It is manipulated to strike the rice stalk a little below the head and knock the rice grains into the canoe.

The outboard motor on the canoe is raised so that only the propeller is in the water. An-

other modification is the extension of a flat board, 20 cm (eight inches) wide, from the back of the keel to keep the rice stalks from fouling the propeller.

The harvesting procedure is to drive at random through the wild rice stand until the trough is full. The canoe is then moved to shore and the rice bagged.

Harvesting operations continue steadily during calm, sunny days but cease with the approach of rain. This is a welcome break giving the families a chance to visit one another. The rainy-day meetings are occasions for much talk and laughter.

In most instances the green wild rice is flown from the picking area by small aircraft which usually have to land on shallow waters dotted with rice patches. With up to 225 kg (500 pounds) on board, their take-offs are not always easy. The air transport costs the pickers 5¢ a pound.

In some locations the pickers move the harvested rice in a convoy of canoes, each laden with 225 to 270 kg (500 to 600 pounds). The return trip on lakes and rivers is uneventful except where the swift, stone-strewn rapids pose a hazard to the canoes and heavy cargo. Navigating the rapids, which in some cases extend about 100 m (110 yards), taxes the skill of the canoeists. The fibreglass coverings may be damaged by rocks or a motor may be rendered unserviceable. However, with previous experience as a guide, the canoeists overcome the obstacles and bring the cargo to its intended destination.

A man using the Osnaburgh-type harvester can gather up to 180 kg (400 pounds) of wild rice a day. It is not unusual for a family to gather more than 3,000 kg (6,600 pounds) during the harvest—a return of about \$7,000 for about a month's work.

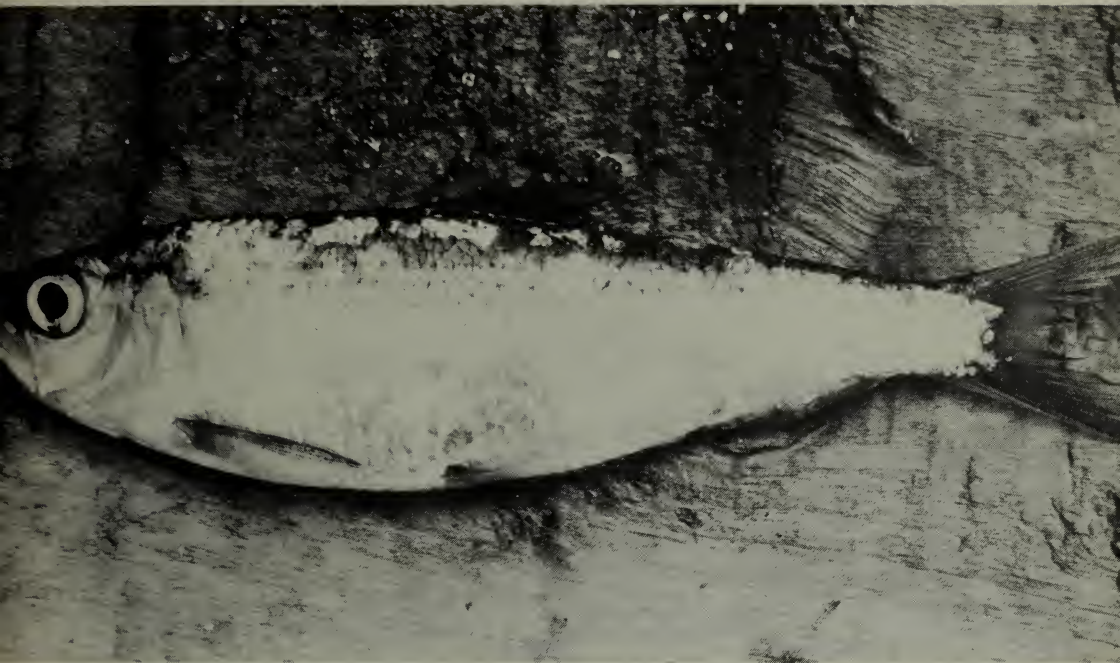
Harvesting conditions were poor in north-western Ontario in 1978 but the wild rice crop totalled 70,437 kg (155,285 pounds). At \$4.40 per kilogram, it was worth \$310,000 to the pickers.

## **"Manomin Wild Rice Recipes"**

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A new publication on how to prepare and serve wild rice, a remarkably nutritious food and a famous delicacy. Notes on history, wild growth, cultivation and harvesting. 24 pp; \$1.50. If ordering by mail, make cheque or money order payable to Treasurer of Ontario. Mail to Ministry of Natural Resources, Toronto, Ontario M7A 1W3.





## Fishing for flavor—alewife

by A. A. Wainio

*Fisheries Extension Biologist, Fisheries Branch*

**L**ONG considered a nuisance fish, the alewife, *Alosa pseudoharengus*, is of more value than some people believe. The alewife is a small fish averaging six inches (15 cm) in length with a deep, laterally compressed body and a broadly triangular head. The back is greyish green and the sides and belly are silvery. When freshly caught, it is iridescent.

The alewife was originally found along the Atlantic coast as a marine fish that migrated up streams to spawn. It has since become landlocked in many inland lakes of eastern North America with its greatest concentration in the Great Lakes.

In inland lakes the alewife inhabits the deep open waters for most of the year and then moves to shallow beaches to spawn. The spawning run peaks in mid-June and during this time they move inshore at night and offshore during the day. Once spawning is completed the adults soon head back to deep water.

The massive die-offs of alewives, which occur in shallow water during the spring and summer months, clog intake pipes and litter beaches and harbours; they are common occurrences in Lake Ontario. Studies have shown that the alewives' inability to adjust to slightly warmer surface temperatures causes these massive mortalities.

These small herring-like fish are basically zooplankton feeders. They, in turn, are preyed upon by larger fish such as burbot and lake trout.

Along the Atlantic coast, where the alewife is large and meaty, it is considered desirable as food and used both fresh and smoked. The fish is bony but the flesh is sweet.

The landlocked alewives in the Great Lakes are small, thin and bony but they are being used increasingly for pet food and fish meal.

Along the Lake Ontario shoreline, a few dip-netters go after the alewives at the begin-

ning of the spawning migration in late April. They are convinced that when fried until crisp the alewives are delicious—even better than smelt.

The early colonists ate “aylwifs” and liked them. Maybe we are missing out on a tasty treat.

### Deep Fried Alewives

Remove the heads from a number of alewives. Wash the bodies in cold water, pat dry and roll them in a mixture of flour, salt and pepper. Then deep fry the alewives until they are brown and crispy. Drain and serve with a wedge of lemon. Nothing can match this dish when served with a pint of ale.

### Alewives and Tomatoes

|  |                               |
|--|-------------------------------|
| 2 lbs pan dressed alewives                           | Oil for frying                |
| 1 egg, beaten  | 4 large tomatoes, sliced      |
| 2 tbsp milk  | 1 tsp sugar                   |
| 1 tsp salt   | 1 tsp salt                    |
| 1 cup fine dry bread crumbs, cracker crumbs or flour | 2 tbsp finely chopped parsley |

Combine egg, milk and salt. Dip alewives in egg mixture; then roll in crumbs until evenly coated. Panfry until golden brown. Arrange on serving platter. Heat 1 to 2 tbsp oil in pan. Sprinkle tomato slices with sugar and salt. Fry 1 minute on each side. Arrange on platter with alewives and sprinkle with parsley. Makes 6 to 8 servings.

## SPOF begins in Aylmer District

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Under the new program, Strategic Planning for Ontario Fisheries, Aylmer District has been allocated \$15,000 for the rehabilitation of two creeks in Middlesex County—Komoka and Caddis. Stream surveys carried out in 1976 and 1979 indicated that fish production had fallen as a result of poor or non-existent spawning beds. The techniques to correct this problem include tree thinning to allow more sunlight to the creek, stream deflectors to increase flow, rip rap and canary grass to stabilize stream banks, silt removal from stream bed, and application of gravel in spawning sites. In addition, Aylmer staff will talk to landowners and attempt to obtain fishery agreements. These will allow staff access to manage the fisheries and provide for public access on a controlled basis, consistent with the ability of the stream to support fishing pressure.

## Lake trout in Lake Ontario

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Fish survey crews have found evidence that lake trout—virtually extinct in Lake Ontario for 30 years—are making a comeback. During contaminant sampling in August, a large number of lake trout were netted offshore from Port Credit. More than half were four-year-olds and the remainder were two- and three-year-olds, indicating a good survival of the stockings in 1977 and 1978. A crew working on salmon management in October netted 13 mature male lake trout near the Lakeview Generating Station in Toronto’s west end; fin clipping patterns indicated they were part of a stocking of 100,000 yearlings at Clarkson in 1976 . . . Next year 200,000 lake trout will be planted in the western basin and an additional 200,000 in the eastern basin, bringing the total stocked in Lake Ontario to 1.3 million. —*Maple District*

## “Vegetation Management for Wildlife in Ontario”

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Reprint of a sellout publication last year. How to manipulate vegetation to provide basic habitat needs of wildlife species; a practical guide for resource managers and conservationists. 64 pp.; 44 drawings by Michael Dumas; \$2.00. If ordering by mail, make cheque or money order payable to Treasurer of Ontario. Mail to Ministry of Natural Resources, Toronto, Ontario M7A 1W3.





*The urban raccoon will accept handouts like an alley cat, but count your fingers.*

## Coons in the cucumbers

by H. D. Jenkins

*Wildlife Information, Wildlife Branch*

SOME people may think of the raccoon as a denizen of the forest, but it is an adaptable little creature and may be found in a variety of habitats. Many urban areas support healthy numbers of this inquisitive, appealing and often unbelievably destructive animal.

It is possible to remain blissfully unaware of its presence, but then comes the day when you wake up to find last night's garbage spread around the back yard, or your carefully tended garden looking like a disaster area, or strange grunts and squeaks emanating from the chimney or attic. The masked bandit strikes again.

Spreading mothballs or any vile smelling substance in an enclosed space like an attic will usually discourage raccoons. Unfortun-

ately, this will not work in an area with a ready supply of fresh air, such as a garden or backyard or even a chimney. Some people claim to have had success in protecting vegetable gardens by sprinkling the plants with very hot pepper which raccoons definitely do not like. This measure, however, is of no value on rainy or windy nights! Others have had success with the sprays that are produced commercially to keep cats and dogs away from flower beds and shrubbery. A large and brave dog in the yard is also a good deterrent.

In the case of raccoons the best treatment is prevention. Chimneys should be fitted with strong shields. Garbage should be stored in stout containers with lock-on lids. Better yet, since raccoons are adept at open-

ing things, it should be kept in the basement or in an outside locker.

It may come as welcome news to a harried gardener that under The Game and Fish Act a landowner may destroy any animal, other than a moose, caribou, or deer, by any means at any time in defense of his property. A word or two of caution, however, is in order.

Most municipalities have by-laws about firing guns within municipal limits, and would take a very dim view of your waiting on the back porch, shotgun in hand, to slay the marauding pilferer of your hard won fruits and vegetables.

Also, humane societies look askance at any means of dealing with animals which they consider cruel and unusual, no matter how understandable the exasperation which

arises in many a householder's breast at the word "raccoon."

If there is one particular problem animal, live-trapping and transportation into the next county is a possible option. If there are many problem animals, though, consider moving to a new neighbourhood.

One final word. It may be a great temptation to adopt that cute little raccoon whose mother has been run over by a car or killed by a dog. Resist it. As they grow older, raccoons almost always become aggressive and even vicious. Since they are solitary animals, such behavior is necessary for their survival in the wild. A raccoon which is old enough to be following its mother about when it loses her is better left to face life as best it can in the wild world into which it was born.



## One shot—four deer

*Conservation Officer Wayne McCormick shows the sad evidence of deer thieves this spring. Three unborn fawns were found with the remains of a five-year-old doe just east of Algonquin Provincial Park.*

*—Photo by Ross Beagan*



*'Every man when he has built himself a home on land lent to him by his Lord, with his help, likes to stay in it sometimes, and to go hunting and fowling and fishing, and to support himself in every way on that loanland . . .'*  
King Alfred the Great, AD 846.

# Language of the Swanimote

by R. M. Alison  
*Wildlife Policy Specialist, Wildlife Branch*

THE annals describing sporting activities in England from 800 to 1800 are remarkably consistent in portraying what appears to be a persistent desire to participate in the ancient arts of venery, falconry and angling. Attached to each of these activities was a vocabulary of specific words or expressions. Most of these seem strange to us for in its advancement the English language has become less rich, abandoning colorful terms in favor of prosaic expressions.

The well-equipped angler of 1400 would set out to his favorite garth or burrock. If it were salmon season he would doubtless be carrying a heck. Otherwise, his gear would comprise an assortment of cadews, pastes or sniggles.

At jucking-time, he would abandon his angling equipment in favor of his hays and stale, surveying the drift of the forest in anticipation of chase. In that epoch, the regard would no doubt have been awe-inspiring—great forests, chases and warrens—lush because of severe forest laws enforced in strict swanimotes by local verdors. Those who were convicted of the serious crimes of disafforesting or assart were subject to particularly severe punishment.

Indeed, as a result of re-afforestating proj-

ects, widespread use of sewels as well as other wildlife programs, local estray populations prospered; trees were adorned with drays, thickets teemed with conies and stags, while each purlieu was covered with fresh foils and traces.

Each autumn morning, the yearning of the hounds echoed across the meadows while, in the distance, magnificent horses could be seen racing in wild-goose-chace in pursuit of spayards or staggarads.

When Englishmen engaged in the age old pursuit of fowling, shrapes were often placed near one of the many marshes in anticipation of a bag of mallards or snipe. Sometimes, anxious fowlers employed large nets to capture birds at night on jukes in their favorite bat-fowling area.

Until the reign of Henry VIII, game animals were taken virtually all year. As a result, large numbers of bird eggs and powts were destroyed.

In the thousand years between 800 and 1800, every English monarch was an avid hunter and fowler. The result was a great deal of conservation legislation which culminated, by the reign of Queen Victoria, in a refined wildlife management program which has remained more or less intact to this day.

## GLOSSARY

|              |   |
|--------------|---|
| Assart       | —A forest offense in which woods or thickets were plucked out by the roots.           |
| Bat-fowling  | —The capture of birds at night with a bramble-net.                                    |
| Burrock      | —A dam constructed for purposes of fishing.   |
| Chase        | —Verb: to hunt;<br>Noun: an area set aside for hunting.                               |
| Cadew        | —A worm made of straw.  |
| Conies       | —Rabbits.   |
| Dis-afforest | —To cut down a tree.  |
| Dray         | —Squirrel nest.   |
| Drift        | —The exact view and examination of a forest to discover what animals are found there. |

|                  |  |
|------------------|--|
| Estray           | —A wild beast.   |
| Foil             | —Deer tracks on grass.   |
| Forest           | —Royal land set aside for hunting.   |
| Fowling          | —Hunting of birds.   |
| Garth            | —A fish weir.  |
| Hays             | —A net, 90 × 120 feet, for taking rabbits.   |
| Heck             | —A devise for catching salmon.   |
| Jucking time     | —Partridge season.   |
| Juke             | —A roost.  |
| Paste            | —An artificial fly of any sort.  |
| Powt             | —Poult.  |
| Purlieu          | —Land near any forest.   |
| Re-afforest      | —Reforest.   |
| Regard           | —View.   |
| Sewel            | —A net used to exclose deer.   |
| Shrape           | —Bait deposited to attract birds, a baited area.   |
| Sniggle          | —A jig for taking eels.  |
| Stag             | —A male red deer. Ages were named as follows:<br>Spitter—1 year old      Staggard—4 year old<br>Spade—2 year old      Stag—5 year old.<br>Spayard—3 year old |
| Stale            | —A live bird decoy.  |
| Swanimote        | —A forest court.   |
| Trace            | —Tracks of wolves or bears.  |
| Venery           | —Hunting.  |
| Verdors          | —A forest magistrate.  |
| Warren           | —An area stocked with rabbits and/or other beasts of the warren.   |
| Wild-goose-chace | —Horses moving forward at a gallop, in single file.  |
| Yearn            | —To bark at prey.  |



### On the record . . . Ontario-Durham co-operation.

*The environmental education area at Nonquon was opened on November 2, 1977, by Yvonne Christie, Chairman of the Durham Region Board of Education, and Dr. Keith Reynolds, Deputy Minister of Natural Resources.*





*Snowshoes are provided for students during winter studies. (And see back cover.)*

## Lessons in wildlife conservation

Report and photos by K. E. Coleman  
*Environmental Biologist, Lindsay District*

CONSIDERING the number of houses, the size of the area, the reproductive potential of the muskrat, and taking into account the losses to the population through winter kill and predation, we recommend that 40 muskrats be harvested . . .

Was the above statement made by a biologist or professional trapper? No. It was the conclusion reached by Grade 12 students from Anderson High School of Whitby during a visit to the Nonquon Provincial Wildlife Area last winter. The students studied the life history, biology and habitat requirements of the muskrat. They assessed the size of the muskrat population on the Education Area and calculated the harvestable surplus.

This achievement is just one example of the many practical lessons in wildlife conservation given by the Environmental Education Program at Nonquon.

Nonquon is located in the Regional Municipality of Durham 32 km (20 miles) north of Oshawa. It covers 1135 ha (2800 acres) of wetlands, low-lying shrublands, upland forests, old pastures and abandoned fields.

Its diversity of habitat and abundance of wildlife attract many people from the large urban centres nearby. They come to Nonquon to enjoy hunting, hiking, canoeing, nature study, photography, snowshoeing, cross-country skiing, snowmobiling, field trials and training of dogs, and other outdoor activities.

The education program was established in 1977 by an agreement between the Durham Region Board of Education and the Ministry of Natural Resources with both agencies sharing the cost of development and operation. By the agreement a tract of 35 ha (87 acres) was set aside exclusively for environmental education. (Hunting, for example, is not permitted in the education area.) Classes may also use the remainder of the wildlife area as long as their use does not conflict with other uses, such as the three-day shotgun season for white-tailed deer in November.

The program is directed primarily to students in Grades 7 to 13. It provides for day use only and allows no more than 35 students

to use the area at one time. Only activities that are compatible with the character of the area are permitted.

In the early stages of the program, the Ministry assigned a biologist to plan and develop educational facilities. An interpretive trail was completed with self-guiding trail guides, and the Ministry also constructed an interpretive display centre in an existing residence on the site. These facilities highlight aspects of resource use and management and are related to topics studied by the students.

The Durham Board developed the program further and purchased equipment and reference material for the use of students at Nonquon. Construction and trades students from Durham Board schools built a portable classroom for the site and a large barge for use on the river during aquatic studies. A viewing tower is planned for the observation of the marsh and waterfowl ponds.

The instruction of students at Nonquon is the responsibility of the Durham Board. A full-time teacher co-ordinates the program and assists visiting teachers to make good use of the facilities. The visiting teachers supervise student activities and follow-up Nonquon lessons in their classrooms. Teachers throughout the Durham Region have been very enthusiastic about the program to date.

The Ministry has participated in several of the Durham Board's professional development days and provided a number of slide-

*Back cover: Students examine invertebrates from Nonquon River.*

*Right: Students see freshly killed grouse and learn about food chains.*

tape shows to illustrate the principles of resource management.

Student participation at Nonquon includes studies of wildlife management, fur management, habitat management, land use planning, and a wide variety of more specialized subjects such as snow ecology, animal adaptations, water chemistry, plant and soil characteristics, and local geography and history.

Efforts are made to relate student activities to practical aspects of resource management. For example, water chemistry studies are related to the physical requirements of fish.

The Nonquon environmental education program enables teachers to extend their classroom studies to an outdoor setting and give their students a different perspective. It meets the requirements of the Durham Region Board of Education and gives the Ministry of Natural Resources an opportunity to demonstrate to young people the principles of resource management within the framework of the school system. It is hoped the Nonquon experience will help to develop responsible and concerned citizens who will appreciate the natural environment and wise resource management.



*A student follows weasel tracks to a brush pile.*





